CLAIMS

1. A process for controlling foaming during an aqueous fermentation process, comprising adding a hydroxy-functional polydiorganosiloxane of viscosity 10 to 150 mPa.s to the aqueous fermenting liquor.

2. A process according to Claim 1, characterised in that the hydroxy-functional polydiorganosiloxane is added at 5 to 250 parts per million by volume based on the aqueous fermenting liquor.

3. A process according to Claim 1 or Claim 2, characterised in that the hydroxy-functional polydiorganosiloxane is a silanol-terminated polydiorganosiloxane.

4. A process according to Claim 3, characterised in that the silanol-terminated polydiorganosiloxane is added to the aqueous fermenting liquor unmixed with any additive.

5. A process according to Claim 1 or Claim 2, characterised in that the hydroxy-functional polydiorganosiloxane contains silicon-bonded hydroxyalkyl groups having 1 to 4 carbon atoms.

6. A process according to any of Claims 1 to 3 or 5, characterised in that a polyglycol with which the hydroxy-functional polydiorganosiloxane is miscible is also added to the aqueous fermenting liquor.

7. A process according to Claim 6, characterised in that the hydroxy-functional polydiorganosiloxane is mixed with up to 200% by weight of the said polyglycol.

8. A process according to any of Claims 1 to 3 or 5, characterised in that the hydroxy-functional polydiorganosiloxane is mixed with up to 50% by weight based on the hydroxy-functional polydiorganosiloxane of a branched silicone resin

9. A process according to any of Claims 1 to 3 or 5, characterised in that the hydroxy-functional polydiorganosiloxane is mixed with up to 150% by weight based on the hydroxy-functional polydiorganosiloxane of a silicone polyether

10. A process according to any of Claims 1 to 3 or 5, characterised in that the hydroxy-functional polydiorganosiloxane is mixed with up to 75% by weight based on the hydroxy-functional polydiorganosiloxane of a trialkylsilyl-terminated polydiorganosiloxane.

11. A process according to any of Claims 1 to 10, characterised in that the hydroxy-functional polydiorganosiloxane contains no solid particles.

12. A process according to any of Claims 1 to 11, characterised in that the hydroxy-functional polydiorganosiloxane is added initially to the aqueous fermenting liquor and an organic oil composition based on a hydrocarbon oil or vegetable oil is subsequently added to control foaming.

13. A foam control agent comprising a blend of a hydroxy-functional polydiorganosiloxane of viscosity 10 to 150 mPa.s and a polyglycol with which the hydroxy-functional polydiorganosiloxane is miscible.

14. A foam control agent according to Claim 13, characterised in that the weight ratio of hydroxy-functional polydiorganosiloxane to polyglycol is in the range 5:1 to 1:2.

15. A foam control agent according to Claim 13 or Claim 14, characterised in that the polyglycol is a hydroxy-terminated polyoxypropylene or oxyethylene-oxypropylene copolymer.

16. A foam control agent according to any of Claims 13 to 15 which further contains up to 50% by weight based on the hydroxy-functional polydiorganosiloxane of a branched silicone resin

17. A foam control agent according to any of Claims 13 to 16 which further contains up to 150% by weight based on the hydroxy-functional polydiorganosiloxane of a silicone polyether.

18. A process for controlling foaming during an aqueous alcoholic fermentation process, comprising adding a hydroxy-functional polydiorganosiloxane of viscosity 10 to 150 mPa.s to the aqueous fermenting liquor.

19. A process for controlling foaming in a proteinaceous fermentation process, comprising adding a hydroxy-functional polydiorganosiloxane of viscosity 10 to 150 mPa.s to the fermenting liquor.

20. A process according to Claim 19 in which the proteinaceous fermentation process is a sugar beet processing and refining process.

AMENDED CLAIMS

[Received by the International Bureau on 10 March 2005 (10.03.05): original claims 1 to 20 replaced by amended claims 1 to 6 (1 page)]

1. A process for controlling foaming during an aqueous fermentation process, an aqueous alcoholic fermentation process, or a proteinaceous fermentation process, comprising adding to the process (i) a hydroxy-functional polydiorganosiloxane having a viscosity of 10-150 mPa.s at 25 °C, (ii) a polyglycol with which the hydroxy-functional polydiorganosiloxane is miscible, (iii) a branched silicone resin, and (iv) a silicone polyether.

2. A process according to Claim 21 including subsequently adding to the process (v) an organic oil composition based on a hydrocarbon oil or vegetable oil.

3. A process according to Claim 21 including adding to the process (v) a trialkylsilyl-terminated polydiorganosiloxane.

4. A foam control agent comprising a blend of (i) a hydroxy-functional polydiorganosiloxane having a viscosity of 10-150 mPa.s at 25 °C, (ii) a polyglycol with which the hydroxy-functional polydiorganosiloxane is miscible, (iii) a branched silicone resin, and (iv) a silicone polyether.

5. A foam control agent according to Claim 24 including (v) an organic oil composition based on a hydrocarbon oil or vegetable oil.

6. A foam control agent according to Claim 24 including (v) a trialkylsilyl-terminated polydiorganosiloxane.